

ABSTRACT

Objects are classified using a normalized cross correlation (NCC) measure to compare two images acquired under non-uniform illumination conditions. An input pattern is classified to assign a tentative classification label and value. The input pattern is
5 assigned to an output node in the radial basis function network having the largest classification value. If the input pattern and an image associated with the node, referred to as a node image, both have uniform illumination, then the node image is accepted and the probability is set above a user specified threshold. If the test image or the node image are not uniform, then the node image is not accepted and the classification value is kept as the
10 value assigned by the classifier. If both the test image and the node image are not uniform, then an NCC measure is used and the classification value is set as the NCC value.